

Historic, Archive Document

Do not assume content reflects current
scientific knowledge, policies, or practices.

F7241.01
F762 Fc
cop. 2

FOREST PRODUCTS LABORATORY
LIST OF PUBLICATIONS
ON
THE CHEMISTRY OF WOOD
May 1964

U. S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY

SEP 16 1964

C & R-PREP.

U. S. Department of Agriculture
Forest Service
Forest Products Laboratory
Madison, Wisconsin 53705
In cooperation with the University of Wisconsin

FOREST PRODUCTS LABORATORY LIST OF PUBLICATIONS

ON

THE CHEMISTRY OF WOOD¹

1945 - 1963

This list includes publications that give general information and results of research by the U.S. Forest Service on the analysis, chemical and physical properties, and conversion processes of wood and wood products. Since the material is difficult to classify and titles are not multiple listed, we suggest that you examine the entire contents.

	<u>Page</u>
Instructions for obtaining publications	ii
Analysis of wood and wood products	1
Chemical properties of wood	2
Cellulose	2
Extraneous components	4
Hemicellulose	4
Lignin	5
Wood and bark	7
Conversion of wood	8
Biochemical conversion	8
Charcoal production	12
Chemical conversion	12
Modified woods	15
Physical properties of wood	21
Microstructure	21
Reactions	24
Surface properties	25
General and miscellaneous	26
Patents	29
Other publication lists issued by the Forest Products Laboratory . .	back cover

¹-This list was previously issued as Forest Products Laboratory Report No. 238.

INSTRUCTIONS FOR OBTAINING PUBLICATIONS

Publications available for distribution at this Laboratory are marked with an asterisk (*). Single copies of reprints and reports may be obtained free upon request from the Director, Forest Products Laboratory, Madison, Wis. 53705.

Federal Government publications, if not available for free distribution at this Laboratory, may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at the price indicated. Send money order, draft, or cash; stamps or personal checks are not accepted.

Trade journals or books may often be purchased from the publishers or may be consulted in various libraries.

The Forest Products Laboratory reserves the right to furnish only those publications that, in its judgment, will give the information requested. Blanket requests or requests for a large number of copies of any individual article will not be filled, except in unusual cases.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

ANALYSIS OF WOOD AND WOOD PRODUCTS

*Thin-layer chromatography of resin acid methyl esters.	:	Zinkel, D. F., & Rowe, J. W.	:	Jour. Chromatog. 13: 74-77, Jan. 1964.
	:		:	
*Separation of the methyl esters of resin acids by gas liquid chromatography.	:	Nestler, F. H. M., & Zinkel, D. F.	:	Analyt. Chem. 35(11): 1747-1749, Oct. 1963.
	:		:	
Sugar units present--Hydrolysis and quantitative paper chromatography.	:	Saeman, J. F., Moore, W. E., & Millett, M. A.	:	"Methods in Carbohydrate Chemistry," Vol. III, Cellulose; Section II, Chapter 12, pp. 54-69. Academic Press, New York, N. Y. 1963.
	:		:	
*Determination of lignin by hydrofluoric acid.	:	Clark, I. T.	:	Tappi 45(4): 310-314, Apr. 1962.
	:		:	
*Spectrophotometric determination of furfural in the presence of sulfur dioxide.	:	Harris, J. F., & Zoch, L. L.	:	Analyt. Chem. 34:201-203, Feb. 1962.
	:		:	
*The spectrophotometric determination of lignin in small wood samples.	:	Johnson, D. B., Moore, W. E., & Zank, L. C.	:	Tappi 44(11): 793-798, Nov. 1961.
	:		:	
A sample applicator for chromatographic paper and its use for 5-hydroxymethyl-2-furaldehyde and levulinic acid analysis.	:	McKibbins, S. W., Harris, J. F., & Saeman, J. F.	:	Jour. Chromatog. 5(3): 207-216, May 1961.
	:		:	
*A method of charcoal analysis.	:	Moore, W. E., & Beglinger, E.	:	Forest Prod. Jour. 11 (1): 17-19, Jan. 1961.
	:		:	
*Chromatographic analysis of sugar alcohols and glycols.	:	Moore, W. E., Effland, M. J., Johnson, D. B., Daugherty, M. A., & Schwerdtfeger, E. J.	:	Appl. Microbiol. 8(3): 169-173, May 1960.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

ANALYSIS OF WOOD AND WOOD PRODUCTS (continued)

*Separation of glycerol from a polyhydric alcohol mixture by nonionic exclusion.	:	Clark, I. T.	:	Analyt. Chem. 30:1676-1678, Oct. 1958.
	:		:	
	:		:	
Techniques for the determination of pulp constituents by quantitative paper chromatography.	:	Saeman, J. F.,	:	Tappi 37(8):336-343, Aug. 1954.
	:	Moore, W. E.,	:	
	:	Mitchell, R. L.,	:	
	:	& Millett, M. A.	:	
	:		:	
*Chemical analyses of wood.	:		:	FPL Tech. Note 235. Revised 1952.
	:		:	
*Method for isolation of hemicelluloses directly from maple wood.	:	Rogers, S. C.,	:	Analyt. Chem. 19:1029, Dec. 1947.
	:	Mitchell, R. L.,	:	
	:	& Ritter, G. J.	:	
	:		:	
Analysis of wood sugars.	:	Saeman, J. F.,	:	Indus. Engin. Chem. (Analyt. Ed.) 17:95, Feb. 1945.
	:	Harris, E. E.,	:	
	:	& Kline, A. A.	:	

CHEMICAL PROPERTIES OF WOOD

Cellulose

Hydrocellulose.	:	Saeman, J. F., &	:	"Methods in Carbohydrate Chemistry,"
	:	Millett, M. A.	:	Vol. III, Cellulose;
	:		:	Section IV, Chapter 22,
	:		:	pp. 131-134, Academic
	:		:	Press, New York, N.Y.
	:		:	1963.
	:		:	
*Nuclear magnetic resonance studies on several cellulose-water systems.	:	Swanson, T.,	:	Tappi 45(12):929-932, Dec. 1962.
	:	Stejskal, E. O., &	:	
	:	Tarkow, H.	:	
	:		:	
*Kinetics of the thermal degradation of cellulose nitrate as measured by an improved Taliani procedure.	:	Millett, M. A.,	:	Tappi 44(9):636-647, Sept. 1961.
	:	Seborg, R. M.,	:	
	:	Zoch, L. L., &	:	
	:	Masuelli, F. J.	:	

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

CHEMICAL PROPERTIES OF WOOD (continued)

Cellulose (continued)

*Nitration of cellulose in anhydrous mixtures of nitrogen tetroxide and hydrogen fluoride.	: Clark, I. T., & Millett, M. A.	: Tappi 44(2):144-146, Feb. 1961.
	:	:
*Measurement of ion-exchange capacity of some wood pulps and nitro pulps.	: Millett, M. A., & Saeman, J. F.	: Tappi 41(10):560-567, Oct. 1958.
	:	:
*Kinetics of the stabilization of cellulose nitrate.	: Millett, M. A., & Saeman, J. F., & Masuelli, F. J.	: Tappi 41(9):469-481, Sept. 1958.
	:	:
Preparation and properties of hydrocelluloses.	: Millett, M. A., & Moore, W. E., & Saeman, J. F.	: Indus. Engin. Chem. 46(7):1493-1497, July 1954.
	:	:
*Effect of high-energy cathode rays on cellulose.	: Saeman, J. F., & Millett, M. A., & Lawton, E. J.	: Indus. Engin. Chem. 44:2848, Dec. 1952.
	:	:
Cellulose solvents and the properties of cellulose in solution.	: Stamm, A. J.	: "Wood Chemistry," Ed. 2, Vol. I, Chapter 8, pp. 226-277. Reinhold Pub. Corp., New York, N. Y. 1952.
	:	:
The exchange of radioactive zinc between cellulose and sodium hydroxide--sodium zincate solutions.	: Borgin, K., & Stamm, A. J.	: Jour. Phys. Colloid Chem. 54(6):772-777, June 1950.
	:	:
Refined neutral sulfite semi-chemical pulps from Douglas-fir.	: Peterson, H. E., & Bray, M. W., & Ritter, G. J.	: Paper Trade Jour. 121 (2):37, July 1945.

	:	:
Title	:	Author
	:	Publication and date
-----	-----	-----

CHEMICAL PROPERTIES OF WOOD (continued)

Extraneous Components

*Eudesmol isomers from <u>Cordia trichotoma</u> wood.	: Seikel, M. K., : & Rowe, J. W.	: Phytochem. 3(1):27, : Jan. - Mar. 1964.
	:	:
*Extraction and identification of lipids from loblolly pine pollen.	: Scott, R. W., & : Strohl, M. J.	: Phytochem. 1(3):189- : 193, Sept. 1962.
	:	:
*Conversion of dihydroquercetin to eriodictyol.	: Pew, J. C.	: Jour. Organic Chem. : 27(8):2935-2936, Aug. : 1962.
	:	:
*Chemical brown stain in sugar pine.	: Millett, M. A.	: Forest Prod. Jour. 2(5): : 232-236, Dec. 1952.
	:	:
Durability of western red cedar heartwood.	: Anderson, A. B.	: Wood (Chicago) 4(10): : 38-41, Oct. 1949.
	:	:
Molecular properties of water- soluble polysaccharides from western larch.	: Borgin, G. L.	: Jour. Amer. Chem. : Soc. 71(6):2247-2248, : June 1949.
	:	:
Douglas Fir heartwood flavonone.	: Pew, J. C.	: Tappi 32(1):39-41, : 1949.
	:	:
Extractives of Douglas-fir and Douglas-fir lignin residue.	: Clark, I. T. : Hicks, J. R., & : Harris, E. E.	: Jour. Amer. Chem. : Soc. 69:3142-3143, : Dec. 1947.

Hemicellulose

*The persistence of wood xylan and mannan through successive prehydrolysis, pulping, puri- fication, and nitration.	: Mitchell, R. L., : Millett, M. A., : Moore, W. E., & : Saeman, J. F.	: Tappi 39(8):571-575, : Aug. 1956.
--	---	--

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

CHEMICAL PROPERTIES OF WOOD (continued)

Hemicellulose (continued)

*Galactan in western larch wood.	:	Mitchell, R. L.,	:	Forest Prod. Jour. 3
	:	& Ritter, G. J.	:	(1):66-68, Feb. 1953.
	:		:	FPL Rept. 1771. 1950.
	:		:	+1964.
*Hemicelluloses from maple holocellulose.	:	Mitchell, R. L.,	:	Indus. Engin. Chem.
	:	Rogers, S. C., &	:	40:1528, Aug. 1948.
	:	Ritter, G. J.	:	
*Molecular properties of hemicellulose fractions.	:	Millett, M. A.,	:	Jour. Phys. Colloid
	:	& Stamm, A. J.	:	Chem. 51:134-148,
	:		:	Jan. 1947.
	:		:	FPL Rept. 1668. 1947.
	:		:	+1964.

Lignin

*Evidence of a biphenyl group in lignin.	:	Pew, J. C.	:	Jour. Organic Chem.
	:		:	28:1048-1054, Apr.
	:		:	1963.
*Fine grinding, enzyme digestion, and the lignin-cellulose bond in wood.	:	Pew, J. C., &	:	Tappi 45(3):247-256,
	:	Weyna, P.	:	Mar. 1962.
*Biphenyl group in lignin.	:	Pew, J. C.	:	Nature 193(4812):250-
	:		:	252, Jan. 1962.
*Properties of powdered wood and isolation of lignin by cellulytic enzymes.	:	Pew, J. C.	:	Tappi 40(7):553-558,
	:		:	July 1957.
Chemical research on the utilization of lignin.	:	Harris, E. E.	:	Forest Prod. Jour.
	:		:	5(5):345-351, Oct. 1955.

+Information Reviewed and Reaffirmed.

Title

Author

Publication and date

CHEMICAL PROPERTIES OF WOOD (continued)

Lignin (continued)

Nitrobenzene oxidation of lignin : model compounds, spruce wood, : and spruce "native lignin." :	Pew, J. C. : : : :	Jour. Amer. Chem. : Soc. 77(10):2831, : May 1955. :
*Highlights in the chemistry of : lignin--1943-1954. :	Harris, E. E. : : : :	Forest Prod. Jour. 5 : (1):26-31, Feb. 1955. : FPL Rept. 2020. 1955. :
*A lignin-carbohydrate bond in : wood. :	Harris, E. E. : : : :	Tappi 36(9):402-405, : Sept. 1953. :
Products from the destructive : distillation of Douglas-fir lignin.:	Fletcher, T. L., : & Harris, E. E. :	Tappi 35(12):536-539, : Dec. 1952. :
*Color reactions of lignin in : solution compared to similar : reactions in the solid state. :	Pew, J. C. : : : :	Jour. Amer. Chem. : Soc. 74(22):5784-5785, : Nov. 1952. :
*Structural aspects of the color : reaction of lignin with strong : acid. :	Pew, J. C. : : : :	Jour. Amer. Chem. : Soc. 74(11):2850-2856, : June 1952. :
*Structural aspects of the color : reaction of lignin with phenols. :	Pew, J. C. : : : :	Jour. Amer. Chem. : Soc. 73(4):1678-1685, : Apr. 1951. :
*Hydrogenation of Douglas-fir : lignin. :	Clark, I. T., : Hicks, J. R., & : Harris, E. E. :	Tappi 34(1):6-11, Jan. : 1951. : :
Lignin for better crops. :	Harris, E. E. : : : :	"Crops in Peace and : War," The Yearbook of : Agriculture--1950-1951, : pp. 883-885. Available : from Superintendent of : Documents, Government : Printing Office, Wash- : ington, D.C. 20402, at : \$2.50. :

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

CHEMICAL PROPERTIES OF WOOD (continued)

Lignin (continued)

Lignin hydrogenation products.	:	Harris, E. E.,	:	Indus. Engin. Chem.
	:	Saeman, J. F., &	:	41(9):2063-2067,
	:	Bergstrom, C. B.	:	Sept. 1949.
	:		:	
Destructive distillation of	:	Fletcher, T. L.,	:	Jour. Amer. Chem.
Douglas-fir lignin.	:	& Harris, E. E.	:	Soc. 69:3144-3145,
	:		:	Dec. 1947.
	:		:	
Hydrogenation of lignin over	:	Saeman, J. F., &	:	Jour. Amer. Chem.
Raney nickel.	:	Harris, E. E.	:	Soc. 68(12):2507-
	:		:	2509, Dec. 1946.

Wood and Bark

*Chemistry of western white pine bark.	:	Nickles, W. C.,	:	Forest Prod. Jour.
	:	& Rowe, J. W.	:	12(8):374-376, Aug.
	:		:	1962.
	:		:	
*Bark and its possible uses.	:		:	FPL Rept. 1666-5.
	:		:	Revised 1961.
	:		:	
*Thermal degradation of wood and cellulose.	:	Stamm, A. J.	:	Indus. Engin. Chem.
	:		:	48(3):413-417,
	:		:	Mar. 1956.
	:		:	
*Chemistry of hickory.	:	Mitchell, R. L.	:	Hickory Task Force
	:		:	Rept. 2, Sept. 1955.
	:		:	Southeast. Forest Expt.
	:		:	Sta., Forest Serv.,
	:		:	USDA, Asheville, N.C.
	:		:	28802.
	:		:	
*Chemical composition of common North American pulpwood barks.	:	Chang, Y., &	:	Tappi 38(5):315-320,
	:	Mitchell, R. L.	:	May 1955.
	:		:	

Title	:	Author	:	Publication and date
-----	-----	-----	-----	-----

CHEMICAL PROPERTIES OF WOOD (continued)

Wood and Bark (continued)

*Effect of heat on the properties and chemical composition of Douglas-fir wood and its major components.	:	Mitchell, R. L.,	:	Forest Prod. Jour. 3(4):38-42, 72-73, Nov. 1953.
	:		:	
	:		:	
Chemistry and chemical utilization of beech.	:	Ritter, G. J.	:	Beech Util. Series 4., 1952. Northeast Tech. Com. on the Util. of Beech, Northeast Forest Expt. Sta., Forest Serv., USDA Upper Darby, Pa. 19082.
	:		:	
Chemical utilization of aspen.	:	Ritter, G. J., & Hossfield, R. L.	:	Lake States Aspen Rept. 18, 1947. Lake States Forest Expt. Sta., Forest Serv., USDA, St. Paul, Minn. 55101.
	:		:	

CONVERSION OF WOOD

Biochemical Conversion

*Factors affecting glycerol production by a newly isolated osmophilic yeast.	:	Hajny, G. J., Hendershot, W. F., & Peterson, W. H.	:	Appl. Microbiol. 8 (1):5-11, Jan. 1960.
	:		:	
*Glycerol production: A pilot-plant investigation for continuous fermentation and recovery.	:	Harris, J. F., & Hajny, G. J.	:	Jour. Biochem. Microbiol. Technol. Engin. 2(1):9-24, 1960.
	:		:	
*A technical review of developments in microbiological utilization of wood sugars.	:	Hajny, G. J.	:	Forest Prod. Jour. 9 (5):153-157, May 1959.
	:		:	

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

CONVERSION OF WOOD (continued)

Biochemical Conversion (continued)

*Factors affecting production of glycerol and d-arabitol by representative yeasts of the genus <u>Zygosaccharomyces</u> .	:	Peterson, W. H., & Hendershot, W. F., & Hajny, G. J.	:	Appl. Microbiol. 6 (5): 349-357, Sept. 1958.
*Wood molasses for stock and poultry feed.	:		:	FPL Rept. 1731. 1955. +1964.
*Polyhydric alcohols from wood.	:	Hall, J. A.	:	FPL Rept. 1984. 1954.
The production of alcohol from wood waste.	:	Saeman, J. F., & Andreassen, A. A.	:	"Indus. Fermentations," Vol. 1, Chapter 5, pp. 136-171. Chem. Publishing Co., New York, N. Y. 1954.
Production of livestock feed from wood waste.	:	Harris, E. E.	:	Forest Prod. Jour. 1 (1):43-48, Sept. 1951.
*Protein evaluations of yeast grown on wood hydrolyzate.	:	Harris, E. E., Hajny, G. J., & Johnson, M. C.	:	Indus. Engin. Chem. 43(7):1593-1596, July 1951.
Thermophilic fermentation of cellulosic and lignocellulosic materials.	:	Hajny, G. J., Gardner, C. H., & Ritter, G. J.	:	Indus. Engin. Chem. 43(6):1384-1389, June 1951.
*Production of nutritive substances from inedible carbohydrates.	:	Stamm, A. J.	:	Amer. Phil. Soc. Proc. 95(1):68-76, Feb. 1951.
*Food-yeast production from wood-processing byproducts.	:	Harris, E. E.	:	FPL Rept. D1754. 1949. +1964.

+Information Reviewed and Reaffirmed.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

CONVERSION OF WOOD (continued)

Biochemical Conversion (continued)

Wood-sugar molasses as a means of utilizing wood residues: and providing high-energy stock feed.	:	Harris, E. E.	:	Wood Working Digest 50 (12):97-100, Dec. 1948; Wood Prod. 54(1):28-30, Jan. 1949.
Acclimatization of yeast to wood sugar.	:	Johnson, M. C., & Harris, E. E.	:	Jour. Amer. Chem. Soc. 70:2961-2963, Sept. 1948.
*Microbiological utilization and disposal of wood-processing wastes.	:	Harris, E. E., & Johnson, M. C.	:	Paper Indus. Paper World 30:940-942, Sept. 1948.
Animal feeds from wood residue.	:	Harris, E. E.	:	Forest Prod. Res. Soc. Proc. 2:60-65, 1948; Wood Working Digest 50 (7):75-82, July 1948.
*Fodder yeast from wood hydrolyzates and still residues.	:	Harris, E. E., Saeman, J. F., Marquardt, R. R., Hannan, M. L., & Rogers, S. C.	:	Indus. Engin. Chem. 40: 1220, July 1948.
*Fermentation of wood hydrolyzates by <u>Torula utilis</u> .	:	Harris, E. E., Hannan, M. L., Marquardt, R. R., & Bubl, J. L.	:	Indus. Engin. Chem. 40: 1216, July 1948.
Wood molasses: low-value timber can be made into live-stock feed.	:	Harris, E. E.	:	Naval Stores Rev. 58 (17):14, July 1948.
Alcohol from Douglas-fir waste.	:	Harris, E. E.	:	Timberman 47(11):40, Sept. 1946; 48(1):40, Nov. 1946; 49(4):68-76, Feb. 1948.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

CONVERSION OF WOOD (continued)

Biochemical Conversion (continued)

Aerobic fermentor with good foam control properties (*Drawing available).	:	Saeman, J. F.	:	Indus. Engin. Chem. (Analyt. Ed.) 19:913-915, Nov. 1947.
Butanol-acetone fermentation of wood sugar.	:	Leonard, R. H., Peterson, W. H., & Ritter, G. J.	:	Indus. Engin. Chem. 39(11):1443-1446, Nov. 1947.
*Production of fodder yeast.	:	Harris, E. E., Hannan, M. L., & Marquardt, R. R.	:	Paper Trade Jour. 125 (22):34-37, Nov. 1947; abridged Paper Indus. Paper World 29:879-881, Sept. 1947.
*Fermentation of Douglas-fir hydrolyzate by <u>S. cerevisiae</u> .	:	Harris, E. E., Hajny, G. J., Hannan, M. L., & Rogers, S. C.	:	Indus. Engin. Chem. 38(9):896-904, Sept. 1946. FPL Rept. 1618. 1946. +1964.
Production of wood sugar in Germany and its conversion to yeast and alcohol.	:	Saeman, J. F., Locke, E. G., & Dickerman, G. K.	:	Paper Trade Jour. 123 (12): 132-140, Sept. 1946.
Production of alcohol from Australian woods.	:	Harris, E. E.	:	Austral. Council Sci. Indus. Res. Jour. 19 (3):303-310, Aug. 1946.
Industrial alcohol from wood waste.	:	Harris, E. E.	:	South. Lbrman. 171 (2153):244-248, Dec. 1945.
Fodder yeast from wood sugar.	:	Peterson, W. H., Snell, J. F., & Frazier, W. C.	:	Indus. Engin. Chem. 37 (1):30-35, Sept. 1945.

+Information Reviewed and Reaffirmed.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

CONVERSION OF WOOD (continued)

Charcoal Production

*Charcoal production, marketing, and use.	:	:	:	FPL Rept. 2213. 1961.
Developments in charcoal production on double wall masonry block and other type kilns.	:	Beglinger, E.	:	Northeast. Logger 6(7): 26-33, Jan. 1958.
*Distillation of resinous wood.	:	Beglinger, E.	:	FPL Rept. R496. Revised 1958.
*Charcoal production in kilns.	:	Beglinger, E.	:	Forest Prod. Jour. 7 (11):399-403, Nov. 1957.
Production of charcoal in a masonry block kiln--structure and operation.	:	:	:	FPL Rept. 2084. 1957.
*Charcoal--its manufacture and use.	:	Beglinger, E., & Locke, E. G.	:	Econ. Bot. 11(2):160- 173, Apr.-June 1957.
Many problems confront destructive distillation industry.	:	Beglinger, E.	:	Naval Stores Rev. 58 (22):15, Aug. 1948.
*Some observations regarding the status of the wood-distillation industry.	:	Beglinger, E.	:	Forest Prod. Res. Soc. Proc. 2:49-54, 1948.

Chemical Conversion

*Rate studies of the hydrotropic delignification of aspenwood.	:	Springer, E. L., Harris, J. F., & Neill, W. K.	:	Tappi 46(9):551-555, Sept. 1963.
Wood as a chemical raw material.	:	Harris, J. F., Saeman, J. F., & Locke, E. G.	:	"The Chemistry of Wood," Chapter 11, pp. 535-585. Interscience Publishers, New York, N. Y. 1963.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

CONVERSION OF WOOD (continued)

Chemical Conversion (continued)

Chemical conversion of wood residues:	:	:
*Pt. I: Separation and utilization of hardwood hemicelluloses.	: Harris, J. F., : Saeman, J. F., : & Locke, E. G.	: Forest Prod. Jour. 8(9): : 248-252, Sept. 1958.
*Pt. II: Kinetics of the acid-catalyzed conversion of xylose to furfural.	: : Root, D. F., : Neill, W. K., : Saeman, J. F., : & Harris, J. F.	: : Forest Prod. Jour. 9(5): : 158-165, May 1959.
*Pt. III: Preparation and properties of hydroxymethylfurfural.	: : Harris, J. F., : Saeman, J. F., : & Zoch, L. L.	: : Forest Prod. Jour. 10 : (2):125-128, Feb. 1960.
*Pt. IV: Economics of the production of furfural from xylose solutions.	: : Harris, J. F., : & Smuk, J. M.	: : Forest Prod. Jour. 11 : (7):303-309, July 1961.
*Pt. V: Kinetics of the acid-catalyzed conversion of glucose to 5-hydroxymethyl-2-furaldehyde and levulinic acid.	: : McKibbins, S. W., : Harris, J. F., : Saeman, J. F., : & Neill, W. K.	: : Forest Prod. Jour. 12 : (1): 17-23, Jan. 1962.
*FAO technical panel on wood chemistry: Working party on wood hydrolysis.	: : Locke, E. G., & : Garnum, E.	: : Forest Prod. Jour. 11 : (8):380-382, Aug. 1961.
*Chemical conversion products from wood.	: : Locke, E. G.	: : FPL Rept. 2179. : 1960.
*Engineering calculations for the distillation of the furfural-water system.	: : Harris, J. F., & : Smuk, J. M.	: : FPL Rept. 2070. : 1959.

	:	:
Title	:	Author : Publication and date
-----	-----	-----

CONVERSION OF WOOD (continued)

Chemical Conversion (continued)

*Hydrogenolysis of sorbitol.	: Clark, I. T.	: Indus. Engin. Chem. 50
	:	: (8):1125-1126,
	:	: Aug. 1958.
	:	:
*Wood saccharification--A summary statement.	: Hall, J. A.,	: Unasylva 10(1):7-16,
	: Saeman, J. F.,	: Feb. 1956.
	: & Harris, J. F.	:
	:	:
*Wood industries as a source of carbohydrates.	: Wiley, A. J.,	: Indus. Engin. Chem. 47
	: Harris, J. F.,	: (7):1397, July 1955.
	: Saeman, J. F.,	:
	: & Locke, E. G.	:
	:	:
*Wood hydrolysis for sugar production.	: Lloyd, R. A., &	: FPL Rept. 2029.
	: Harris, J. F.	: 1955.
	:	:
Wood saccharification.	: Harris, E. E.	: Advances Carbohydrate
	:	: Chem. 4:153-188, 1949.
	:	:
Wood molasses, a new use for sawmill waste.	: Harris, E. E.	: South. Lbr. Jour., Oct.
	:	: 1948.
	:	:
Wood-sugar molasses from wood waste.	: Harris, E. E.	: South. Lbrman. 175
	:	: (2201):157-161,
	:	: Dec. 1947.
	:	:
Hydrolysis of wood cellulose and decomposition of sugar in dilute phosphoric acid.	: Harris, E. E., &	: Jour. Phys. Colloid
	: Lang, B. G.	: Chem. 51:1430-1441,
	:	: Nov. 1947.
	:	:
The Madison wood-sugar process.	: Harris, E. E., &	: Indus. Engin. Chem. 38
	: Beglinger, E.	: (9):890, Sept. 1946.
	:	:
Kinetics of the hydrolysis of wood and of the decomposition of sugars in dilute acid at high temperatures.	: Saeman, J. F.	: Indus. Engin. Chem. 37
	:	: (1):43, Jan. 1945.
	:	:
	:	:

Title	:	Author	:	Publication and date
-----	-----	-----	-----	-----

CONVERSION OF WOOD (continued)

Chemical Conversion (continued)

The rotary digester in wood saccharification.	: Plow, R. H.,	: Indus. Engin. Chem. 37
	: Saeman, J. F.,	: (1):36, Jan. 1945.
	: Turner, H. D., &	
	: Sherrard, E. C.	:
	:	:
Hydrolysis of wood in a stationary digester by successive treatments with dilute sulfuric acid.	: Harris, E. E.,	: Indus. Engin. Chem. 37
	: Beglinger, E.,	: (1):12, Jan. 1945.
	: Hajny, G. J., &	:
	: Sherrard, E. C.	:
	:	:
A review of wood saccharification processes in the United States prior to World War II.	: Sherrard, E. C.,	: Indus. Engin. Chem. 37
	: & Kressman,	: (1):5, Jan. 1945.
	: F. W.	:
	:	:
The quantitative saccharification of wood and cellulose.	: Saeman, J. F.,	: Indus. Engin. Chem.
	: Bubl, J. L., &	: (Analyt. Ed.) 17(1):35,
	: Harris, E. E.	: Jan. 1945.

Modified Woods

*U.S. Forest Products Laboratory notes on the treatment of wood with polyethylene glycol.	:	: FPL-06. 1963.
	:	:
	:	:
	:	:
*Conservation of 200-year-old waterlogged boats with polyethylene glycol.	: Seborg, R. M., &	: Studies in Conservation
	: Inverarity, R. B.	: 7(4):111-119, Nov. 1962.
	:	:
	:	:
*Preservation of old, waterlogged wood by treatment with polyethylene glycol.	: Seborg, R. M., &	: Sci. 136(3516):649-650,
	: Inverarity, R. B.	: May 1962.
	:	:
	:	:
*Modified woods.	: Stamm, A. J.	: FPL Rept. 2192.
	:	: Revised 1962.

	:	:
Title	:	Author : Publication and date
-----	-----	-----

CONVERSION OF WOOD (continued)

Modified Woods (continued)

*Forest Products Laboratory resin-treated wood (impreg).	: Stamm, A. J., & : Seborg, R. M.	: FPL Rept. 1380. : Revised 1962.
Effectiveness of stabilized sur- face layers of wood as moisture barriers.	: Tarkow, H., & : Ishaq, S. M.	: Forest Prod. Jour. 11 : (4):203-204, Apr. 1961.
*Board materials from wood residues.	: :	: FPL Rept. 1666-21. : Revised 1961.
*Decay resistance and dimensional stability of five modified woods.	: Stamm, A. J., & : Baechler, R. H.	: Forest Prod. Jour. 10 : (1):22-26, Jan. 1960.
*Effect of polyethylene glycol on the dimensional stability of wood.	: Stamm, A. J.	: Forest Prod. Jour. 9 : (10):375-381, Oct. 1959.
General summary of the FPL wood stabilization seminar.	: Tarkow, H.	: Forest Prod. Jour. 9 : (3):110-111, Mar. 1959.
Toward new and better means of dimensionally stabilizing wood.	: Stamm, A. J.	: Forest Prod. Jour. 9(3): : 107-110, Mar. 1959.
*Dimensional stabilization of paper by catalyzed heat treat- ment and cross-linking with formaldehyde.	: Stamm, A. J.	: Tappi 42(1):44-50, 1959.
*Dimensional stabilization of wood by thermal reactions and formaldehyde cross-linking.	: Stamm, A. J.	: Tappi 42(1):39-44, 1959.
*Report of dimensional stabiliza- tion seminar held at U.S. Forest Products Laboratory, Madison, Wis., Jan. 21-23, 1959.	: : :	: FPL Rept. 2145. 1959. : +1964.

+Information Reviewed and Reaffirmed.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

CONVERSION OF WOOD (continued)

Modified Woods (continued)

*Effect of resin treatment and compression upon the weathering properties of veneer laminates.	: Lloyd, R. A., & Stamm, A. J.	: Forest Prod. Jour. 8 (8):230-235, 1958.
	:	:
*Effect of storage on phenolic resins and their ability to stabilize wood dimensions.	: Seborg, R. M., & Tarkow, H.	: Forest Prod. Jour. 7 (8):256-261, Aug. 1957.
	:	:
*Dimensional stabilization of wood with carbowaxes.	: Stamm, A. J.	: Forest Prod. Jour. 6 (5):201-204, May 1956.
	:	:
*Swelling and dimensional control of paper:	:	:
I. Effect of wet-strength resins and carbowax.	: Stamm, A. J., & Cohen, W. E.	: Austral. Pulp Paper Indus. Tech. Assoc. Proc. 10:346-365, 1956.
	:	:
II. Effect of cyanoethylation, acetylation and cross-linking with formaldehyde.	: Stamm, A. J., & Cohen, W. E.	: Austral. Pulp Paper Indus. Tech. Assoc. Proc. 10:366-393, 1956.
	:	:
*Application of impreg for patterns and die models.	: Seborg, R. M., & Vallier, A. E.	: Forest Prod. Jour. 4(5): 305-312, Oct. 1954; Woodworking Digest 56 (11):123-136, Nov. 1954.
	:	:
*Effect of particle size and shape on strength and dimensional stability of resin-bonded wood-particle panels.	: Turner, H. D.	: Forest Prod. Jour. 4 (5):210-223, Oct. 1954.
	:	:
*Effect of heat upon the dimensional stabilization of wood.	: Seborg, R. M., Tarkow, H., & Stamm, A. J.	: Forest Prod. Jour. 3 (3):59-67, Sept. 1953.

Title	Author	Publication and date
-------	--------	----------------------

CONVERSION OF WOOD (continued)

Modified Woods (continued)

*Effect of formaldehyde treatments upon the dimensional stabilization of wood.	: Tarkow, H., & : Stamm, A. J.	: Forest Prod. Jour. 3 : (2):33-37, June 1953.
	: :	: :
Modified woods.	: Locke, E. G.	: Forest Prod. Jour. 2 : (4):54-56, Nov. 1952.
	: :	: :
*Forest Products Laboratory resin-treated, laminated, compressed wood (compreg).	: Stamm, A. J., & : Seborg, R. M.	: FPL Rept. 1381. : Revised 1951. +1964.
	: :	: :
*Acetylated wood.	: Tarkow, H., : Stamm, A. J., & : Erickson, E. C. O.	: FPL Rept. 1593. : Revised 1950. +1964.
	: :	: :
*Relation of several formation variables to properties of phenolic-resin-bonded wood-waste hardboards.	: Turner, H. D., : & Kern, J. D.	: FPL Rept. 1786. : 1950. +1956.
	: :	: :
Swelling and shrinking of wood, paper, and cotton textiles and their control.	: Tarkow, H.	: Tappi 32:203-211, : May 1949.
	: :	: :
*Basic properties of yellow birch laminates modified with phenol and urea resins.	: Erickson, E. C. : O., & Faulkes, : W. F.	: FPL Rept. 1741. : 1949. +1964.
	: :	: :
A means of determining the hardness of wood and modified woods over a broad specific gravity range.	: Weatherwax, R. C., : Erickson, E. C. : O., & Stamm, : A. J.	: ASTM Bul. 153 (TP : 176), Aug. 1948.

+Information Reviewed and Reaffirmed.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

CONVERSION OF WOOD (continued)

Modified Woods (continued)

Small-scale manufacture of insulating boards from wood waste.	:	:	:	H&HFA Tech. Bul. 5, p. 39, July 1948. Out of print.
*Sawdust-binder compositions.	:	Gabriel, A. E.	:	Modern Plastics 25(8): 145-146, 200-216, Apr. 1948.
*Dimensional stability of synthetic board materials used as core stock.	:	Millett, M. A. & Hohf, J. P.	:	Forest Prod. Res. Soc. Proc. 2:280-288, 1948.
*Effect of some manufacturing variables on the properties of fiberboard prepared from milled Douglas-fir.	:	Turner, H. D., Hohf, J. P., & Schwartz, S. L.	:	Forest Prod. Res. Soc. Proc. 2:100-114, 1948.
Modified woods.	:	Stamm, A. J.	:	Modern Plastics Encyclopedia, p. 725, 1948.
*Wood treatment with urea resin-forming systems: a study of size and species limitations.	:	Millett, M. A., & Stamm, A. J.	:	Modern Plastics 25: 125-127, Sept. 1947. FPL Rept. 1703. 1947. +1964.
Treatment of wood with urea resin-forming systems: comparison with phenolic resins for making compreg.	:	Millett, M. A., & Stamm, A. J.	:	Modern Plastics 24(6): 159-160, 208, 210, 212, Feb. 1947.
Compreg.	:	Stamm, A. J.	:	Modern Plastics Encyclopedia 1:705-707, 1947.
Dimensional stabilization of wood.	:	Stamm, A. J., & Tarkow, H.	:	Jour. Phys. Colloid Chem. 31:493, 1947.

+Information Reviewed and Reaffirmed.

Title	Author	Publication and date
-------	--------	----------------------

CONVERSION OF WOOD (continued)

Modified Woods (continued)

Modified woods.	: Stamm, A. J.	: Amer. Wood-
	:	: Preservers' Assoc.
	:	: Proc., 1946.
	:	:
*Staybwood: heat-stabilized wood.	: Stamm, A. J.,	: Indus. Engin. Chem.
	: Burr, H. K., &	: 38:630, 1946.
	: Kline, A. A.	: FPL Rept. 1621.
	:	: Revised 1955. +1964.
	:	:
Treatment of wood with urea	: Millett, M. A.,	: Modern Plastics 24 (2):
resin-forming systems:	: & Stamm, A. J.	: 150, 1946.
dimensional stability.	:	:
	:	:
Wood for storage-battery	: Peakes, L. V.,	: Indus. Engin. Chem.
separators.	: Lloyd, R. A.,	: Indus. Ed. 38:780,
	: Barnes, V. S.,	: 1946.
	: Berry, J. H., &	:
	: Ritter, G. J.	:
	:	:
Pulp-reinforced plastics.	: Schwartz, S. L.,	: South. Pulp Paper Jour.
	: Pew, J. C., &	: 8(3):19, Aug. 1945.
	: Meyer, H. R.	:
	:	:
*Heat-stabilized compressed	: Seborg, R. M.,	: Mech. Engin. 67(1):25-
wood (staypak).	: Millett, M. A.,	: 31, 1945.
	: & Stamm, A. J.	: FPL Rept. 1580.
	:	: Revised 1962.
	:	:
Pulps for pulp-reinforced	: Schwartz, S. L.,	: Paper Trade Jour. 121
plastics.	: Pew, J. C., &	: (2):42, 1945.
	: Meyer, H. R.	:
	:	:
*The electrical resistivity of	: Weatherwax, R. C.,	: Elect. Engin. Trans.
resin-treated wood (impreg and	: & Stamm, A. J.	: 64:833, 1945.
compreg), hydrolyzed-wood	:	: FPL Rept. 1385. 1943.
sheet (hydroxylin), and lami-	:	: +1963.
nated resin-treated paper papreg:	:	:

+Information Reviewed and Reaffirmed.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

CONVERSION OF WOOD (continued)

Modified Woods (continued)

New applications of wood and paper.	: Stamm, A. J.	: "The New Plastics,"
	:	: Chapter 8, pp. 197-228.
	:	: D. Van Nostrand & Co.,
	:	: Inc., New York, N. Y.
	:	: 1945.
	:	:
*Low-resin-content and resin-free pulp plastics.	: Schwartz, S. L.,	: FPL Rept. D1483.
	: Pew, J. C., &	: 1945. +1959.
	: Meyer, H. R.	:
	:	:
*Comparison of commercial water-soluble phenol-formaldehyde resinoids for wood impregnation.	: Burr, H. K., &	: FPL Rept. 1384.
	: Stamm, A. J.	: 1945. +1956.
	:	:
	:	:
*Influence of manufacturing variables on the impact resistance of resin-treated wood.	: Millett, M. A.,	: FPL Rept. 1386.
	: Seborg, R. M.,	: 1943. +1962.
	: & Stamm, A. J.	:
	:	:
	:	:
*Effect of resin treatment and compression upon the properties of wood.	: Seborg, R. M.,	: FPL Rept. 1383.
	: & Stamm, A. J.	: 1942. +1956.
	:	:

PHYSICAL PROPERTIES OF WOOD

Microstructure

Asymmetrical permeability of composite laminates.	: Tarkow, H.	: Forest Prod. Jour. 13
	:	: (8):318, Aug. 1963.
	:	:
*Distribution of hot-water soluble material in cell walls and cavities of redwood.	: Tarkow, H., &	: Forest Prod. Jour. 11
	: Krueger, J.	: (5):228-229, May 1961.
	:	:

+Information Reviewed and Reaffirmed.

Title

Author

Publication and date

PHYSICAL PROPERTIES OF WOOD (continued)

Microstructure (continued)

- | | | |
|--|--|---|
| *Determining the distribution of interstructural openings in wood. | : Stamm, A. J., & Wagner, E. | : Forest Prod. Jour. 11 (3):141-144, Mar. 1961. |
| *Combined bound-water and water-vapor diffusion into Sitka spruce. | : Stamm, A. J. | : Forest Prod. Jour. 10 (12):644-648, Dec. 1960. |
| *Bound water diffusion into wood in across-the-fiber directions. | : Stamm, A. J. | : Forest Prod. Jour. 10 (10):524-528, Oct. 1960. |
| *Diffusion through air-filled capillaries of softwoods. | : | : |
| I. Carbon dioxide. | : Tarkow, H., & Stamm, A. J. | : Forest Prod. Jour. 10 (5):247-250, May 1960. |
| II. Water vapor. | : Tarkow, H., & Stamm, A. J. | : Forest Prod. Jour. 10 (6):323-324, June 1960. |
| Measurement of internal stresses by radiofrequency spectroscopy. | : Gutowsky, H. S., Bernheim, R. A., & Tarkow, H. | : Jour. Polymer Sci. 44: 143, 1960. |
| *Bound water diffusion into wood in the fiber direction. | : Stamm, A. J. | : Forest Prod. Jour. 9 (1):27-32, Jan. 1959. |
| Swelling pressure of wood. | : Tarkow, H., & Turner, H. D. | : Forest Prod. Jour. 8 (7):193-197, July 1958. |
| *Diffusion of water into uncoated cellophane. I. From rates of water vapor adsorption and liquid water adsorption. II. From steady-state diffusion measurements. | : Stamm, A. J. | : Jour. Phys. Chem. 60 (1):76-86, Jan. 1956. |
| *Diffusion in cellulosic materials. | : Stamm, A. J. | : Austral. Pulp Paper Indus. Tech. Assoc. Proc. 10:244-271, 1956. |

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

PHYSICAL PROPERTIES OF WOOD (continued)

Microstructure (continued)

*Diffusion and penetration mechanism of liquids into wood.	: Stamm, A. J.	: Pulp Paper Mag. Canada 54(2):54-63, Feb. 1953.
	:	:
*The reaction of formic acid with carbohydrates. I. The reaction of formic acid with sugars. II. Polysaccharides: a new method for determining accessibility.	: Tarkow, H., & Stamm, A. J.	: Jour. Phys. Chem. 56 (2):262-271, Feb. 1952.
	:	:
Fiber studies contributing to the differential shrinkage of cellulose.	: Ritter, G. J., & Mitchell, R. L.	: Paper Indus. 33(10): 1189-1193, Jan. 1952.
	:	:
*Microscopic polarized light method for studying cellulose fibers.	: Ritter, G. J.	: Paper Indus. 33(8): 926-931, Nov. 1951.
	:	:
Accessibility of cellulose.	: Tarkow, H.	: Tappi 33(12):595-599, Dec. 1950.
	:	:
Specific volume of native cellulose.	: Stamm, A. J.	: Textile Res. Jour. 20 (9):631-636, Sept. 1950.
	:	:
*Penetration of cellulose fibers.	: Stamm, A. J., & Tarkow, H.	: Jour. Phys. Colloid Chem. 54(6):745-753, June 1950.
	:	:
Passage of materials through wood, paper, cellulosic membranes and fabrics.	: Stamm, A. J.	: Tappi 32:193-199, May 1949.
	:	:
Membranous substances in common heartwoods.	: Pew, J. C.	: Jour. Forestry 47:196-199, Mar. 1949.
	:	:
Wood, a limited-swelling gel.	: Stamm, A. J., & Tarkow, H.	: Jour. Phys. Colloid Chem. 53:251-260, Feb. 1949.
	:	:

Title

Author

Publication and date

PHYSICAL PROPERTIES OF WOOD (continued)

Microstructure (continued)

Microstructure of wood and wood fibers.	: Ritter, G. J.	: Tappi 32:11-17, Jan. 1949.
Microstructure of wood and wood components.	: Ritter, G. J.	: Paper Mill News 71(38): 13, Sept. 1948.
The passage of water through the capillary structure of wood.	: Stamm, A. J.	: Faraday Soc. Discuss., pp. 264-273, 1948.
*Diffusion in wood.	: Burr, H. K., & Stamm, A. J.	: Jour. Phys. Colloid Chem. 51:240, 1947.
*The coefficients of thermal expansion of wood and wood products.	: Weatherwax, R. C., & Stamm, A. J.	: Amer. Soc. Mech. Engin. Trans. 69(44): 421, 1947.
		: FPL Rept. 1487. 1946. +1964.
Passage of liquids, vapors, and dissolved materials through softwoods.	: Stamm, A. J.	: USDA Tech. Bul. 929, Oct. 1946. Out of print.

Reactions

*Changes in dimension on heating green wood.	: Yokota, T., & Tarkow, H.	: Forest Prod. Jour. 12 (1):43-52, Jan. 1962.
*Interaction of moisture and wood.	: Tarkow, H.	: FPL Rept. 2198. 1960.
Swelling of wood and fiber-boards in liquid ammonia.	: Stamm, A. J.	: Forest Prod. Jour. 5 (6):413-416, Dec. 1955.
*Treatment of wood with aqueous solutions: Effect of wetting agents.	: Stamm, A. J., & Petering, W. H.	: Indus. Engin. Chem. 32:809, 1940.
		: FPL Rept. 1229. 1940. +1964.

+Information Reviewed and Reaffirmed.

64-024

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

PHYSICAL PROPERTIES OF WOOD (continued)

Reactions (continued)

*Thermodynamics of the swelling of wood.	:	Stamm, A. J., & Loughborough, W. K.	:	FPL Rept. 1215. 1935. +1960.
*Swelling of wood.	:	Stamm, A. J.	:	FPL Rept. 1061. 1934. +1961.
*Effect of inorganic salts upon the swelling and the shrinking of wood.	:	Stamm, A. J.	:	FPL Rept. 1156. 1934. +1956.

Surface Properties

*The surface tension of viscous polymers.	:	Tarkow, H.	:	Jour. Polymer Sci. 28 (116):35-43, Feb. 1958.
*A fundamental investigation of adhesion. II. Method for measuring shrinkage stress in restrained gelatin films.	:	Weatherwax, R. C., Coleman, B., & Tarkow, H.	:	Jour. Polymer Sci. 27 (115):59-66, Jan. 1958.
*Adsorption in swelling versus nonswelling systems. I. Contact area. II. Free energy change per unit area of effective molecular contact.	:	Stamm, A. J.	:	Tappi 40(9):761-770, Sept. 1957.
*Method for casting gelatin films.	:	Coleman, B., Tarkow, H., & Weatherwax, R. C.	:	Jour. Polymer Sci. 19 (92):380-381, Feb. 1956.
Surface properties of cellulosic materials.	:	Stamm, A. J.	:	"Wood Chemistry," Ed. 2, Vol. II, Chapter 18, pp. 691-814. Reinhold Pub. Corp., New York, N. Y. 1952.

+Information Reviewed and Reaffirmed.

Title

Author

Publication and date

PHYSICAL PROPERTIES OF WOOD (continued)

Surface Properties (continued)

Bound water and hydration.	: Stamm, A. J.	: Tappi 33(9):435-439,
	:	: Sept. 1950.
	:	: Pulp Paper Mag.
	:	: Canada 51(10):90-93,
	:	: Sept. 1950.
	:	:
*Surface-bound versus	: Stamm, A. J., &	: FPL Rept. 1235. 1938.
capillary-condensed water in	: Hansen, L. A.	: +1960.
wood.	:	:

GENERAL AND MISCELLANEOUS

*Uses for slabs, edgings, and	:	: FPL-038. 1964.
trims.	:	:
	:	:
Annual Reviews:	:	:
	:	:
*Progress in chemical	: Rowe, J. W.	: Forest Prod. Jour. 13
conversion.	:	: (7):276-290, July 1963.
	:	:
*Progress in chemical	: Rowe, J. W.	: Forest Prod. Jour. 12
conversion.	:	: (3):124-140, Mar. 1962.
	:	:
Progress in chemical	: Rowe, J. W., &	: Forest Prod. Jour. 11
conversion.	: Pearl, I. A.	: (2):85-107, Feb. 1961.
	:	:
*Review of chemical	: Pearl, I. A., &	: Forest Prod. Jour. 10
utilization.	: Rowe, J. W.	: (2):91-112, Feb. 1960.
	:	:
*Review of chemical	: Locke, E. G.	: Forest Prod. Jour. 7
utilization.	:	: (2):61-67, Feb. 1957.
	:	:
*Review of chemical	: Locke, E. G.	: Forest Prod. Jour. 6
utilization.	:	: (2):63-66, Feb. 1956.
	:	:
*Vapor liquid equilibrium data	: Rabe, A. E., &	: Jour. Chem. Engin.
for the binary system--sulfur	: Harris, J. F.	: Data 8(3):333-336.
dioxide and water.	:	: 1963.

+Information Reviewed and Reaffirmed.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

GENERAL AND MISCELLANEOUS (continued)

*The flavonoid constituents of barley (<u>Hordeum vulgare</u>): III. Lutonarin and its 3' -methyl ether.	: Seikel, M. K., : Bushnell, A. J., : & Birzgalis, R. : : :	: Arch. Biochem. : Biophys. 99(3):451- : 457, Dec. 1962. : : :
*Identifications of a 3- benzylidene flavanone as a by- product of a chalcone synthesis.	: Seikel, M. K., : Lounsbury, M. J., : & Wang, S. : : :	: Jour. Organic Chem. : 27(8):2952-2954, : Aug. 1962. : : :
Wood through the eyes of a chemist.	: Millett, M. A. : : : :	: Miss. Forest Prod. : Util. Conf. Proc., pp. : 19-29, 1962. : : :
Some books about wood.	: : : :	: FPL Rept. 399. 1961. : : :
*Some publications on domestic and foreign woods.	: : : : :	: FPL Rept. 1479. : Revised 1961. : : :
*Chemical conversion products from wood.	: Locke, E. G. : : :	: FPL Rept. 2179. : 1960. : :
*Materials of construction: Wood.	: Stamm, A. J., & : Baechler, R. H. : : :	: Indus. Engin. Chem. : 50(9):1496-1498, : Sept. 1958. : : :
*Chemical research at U.S. Forest Products Laboratory.	: Locke, E. G. : : :	: FPL Rept. 2134. : 1958. : :
*Wood--The future chemical raw material.	: Locke, E. G. : : :	: Forest Prod. Jour. 6 : (8):289-292, Aug. 1956. : : :
Recent work on the chemical utilization of wood residues in the United States.	: Saeman, J. F. : : : :	: Jour. Hokkaido Forest : Prod. Res. Inst., : Japan. No. 50, p. 66, : 1956. : : :
Materials of construction: Wood.	: Baechler, R. H., : & Stamm, A. J. : :	: Indus. Engin. Chem. : 46(10):2127-2130, : Oct. 1954.

Title

Author

Publication and date

GENERAL AND MISCELLANEOUS (continued)

*Wood resources.	: Locke, E. G., &	: Indus. Engin. Chem. 46
	: Johnson, K. G.	: (3):478-483, Mar. 1954.
	:	:
*Chemical utilization and forest management.	: Locke, E. G.	: Forest Prod. Jour. 4
	:	: (1):10, Feb. 1954.
	:	:
Chemical processing of wood.	: Stamm, A. J., &	: Chem. Pub. Co., Inc.,
	: Harris, E. E.	: New York, N.Y. 595
	:	: pp. \$12. 1953.
	:	:
*General recommendations regarding methods for wood waste utilization.	:	: FPL Rept. 1666.
	:	: Revised 1953. +1964.
	:	:
*Status of chemical utilization of wood waste.	: Saeman, J. F.	: Forest Prod. Jour. 2
	:	: (5):50-55, Dec. 1952.
	:	:
Materials of construction: Wood.	: Stamm, A. J.	: Indus. Engin. Chem.
	:	: 43(10):2276-2279,
	:	: Oct. 1951.
	:	:
Chemicals from wood.	: Stamm, A. J.	: "Trees," The Yearbook
	:	: of Agriculture--1949,
	:	: pp. 639-643. Available
	:	: from Superintendent of
	:	: Documents, Government
	:	: Printing Office, Wash-
	:	: ington, D.C. 20402, at
	:	: \$2.50.
	:	:
Utilizing wood residues.	: Stamm, A. J.	: Timber News 57(2126):
	:	: 480-482, Dec. 1949; 58
	:	: (2127):19-21, Jan. 1950.

+Information Reviewed and Reaffirmed.

Title	Author	Publication and date
-------	--------	----------------------

GENERAL AND MISCELLANEOUS (continued)

Importance of conversion products of wood.	: Stamm, A. J.	: "Wood: Report of Symposium on Wood," June 16-17, 1949, pp. 89-110, sponsored by Natl. Res. Council & Office of Naval Res. Published by Office of Naval Res., Dept. of Navy, Washington, D.C.
Wood (properties of interest to a chemical engineer).	: Stamm, A. J.	: Indus. Engin. Chem. 39: 1256-1261, Oct. 1947; 40:1923-1932, Oct. 1948; 41:2149-2152, Oct. 1949.
New goods from wood.	: Stamm, A. J., & Chidester, G. H.	: "Science in Farming," The Yearbook of Agriculture--1943-1947, pp. 725-733. Available from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at \$2.25.
Chemical utilization of wood and wood waste.	: Harris, E. E.	: Natl. Farm Chemurgic Council Paper 441. 1946.

PATENTS

3,001,984	Process for preparing nitric acid esters of cellulose. I. T. Clark and M. A. Millett. Granted Sept. 26, 1961.
3,034,947	Gas-Aerosol Filter Material. John R. Conlisk, Leonard A. Jonas, Alfred J. Stamm, Harold Tarkow, and Richard C. Weatherwax. Granted April 25, 1956.
2,572,070	Method of stabilizing wood. A. J. Stamm and H. D. Turner. Granted Oct. 23, 1951.

PATENTS (continued)

- 2,481,049 Apparatus for corrugating sheet material. A. J. Stamm and H. D. Turner. Granted Sept. 6, 1949.
- 2,459,550 The destructive distillation of solids in a liquid bath. A. J. Stamm. Granted Jan. 18, 1949.
- 2,453,679 Method of forming compressed wood structures. A. J. Stamm, R. M. Seborg, and M. A. Millett. Granted Nov. 9, 1948.
- 2,417,995 Acetylation of lignocellulosic board materials. A. J. Stamm and H. Tarkow. Granted Mar. 25, 1947.
- 2,391,489 Method of molding. A. J. Stamm and H. D. Turner. Granted Dec. 25, 1945.

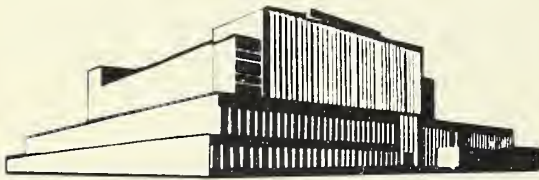
Note: Copies of patents are available from the U.S. Patent Office, Washington, D.C., for 25 cents each.

PUBLICATION LISTS ISSUED BY THE
FOREST PRODUCTS LABORATORY

The following lists of publications deal with investigative projects of the Forest Products Laboratory or relate to special interest groups and are available upon request:

Box, Crate, and Packaging Data	Logging, Milling, and Utilization of Timber Products
Chemistry of Wood	Mechanical Properties of Timber
Drying of Wood	Pulp and Paper
Fire Protection	Structural Sandwich, Plastic Laminates, and Wood-Base Components
Fungus and Insect Defects in Forest Products	Thermal Properties of Wood
Glue and Plywood	Wood Finishing Subjects
Growth, Structure, and Identification of Wood	Wood Preservation
Furniture Manufacturers, Woodworkers, and Teachers of Woodshop Practice	Architects, Builders, Engineers, and Retail Lumbermen

Note: Since Forest Products Laboratory publications are so varied in subject matter, no single catalog of titles is issued. Instead, a listing is made for each area of Laboratory research. Twice a year, December 31 and June 30, a list is compiled showing new reports for the previous 6 months. This is the only item sent regularly to the Laboratory's mailing roster, and it serves to keep current the various subject matter listings. Names may be added to the mailing roster upon request.



FOREST PRODUCTS LABORATORY

